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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,947	12/17/2001	Dung H. Ky	5953.2-1	2608

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EXAMINER

HARPER, VINCENT P

ART UNIT PAPER NUMBER

2654

DATE MAILED: 11/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/022,947

Applicant(s)

KY, DUNG H.

Examiner

V. Paul Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The Examiner has considered the references listed in the Information Disclosure Statement dated 10/31/2002. A copy of the Information Disclosure Statement is attached to this office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Hutchins (Patent No. 5,208,897).

Regarding claim 1, Hutchins teaches a method for speech recognition based on subsyllable spellings. Hutchins' method includes the following steps: the digitizing of an audio input (Fig. 4A, **12 14** col. 3, lines 16-20), which corresponds to "receiving digital data representation of speech having at least one word"; verifying the conformance of the input to words in a word list (Fig. 4A, **38 40 22 20**, col. 3, lines 25-34), which corresponds to "searching a library containing digital data representation of a plurality of words and matching the digital data representation of the at least one word to digital data representation of a word in the library"; converting a sequence of subsyllables into syllables (col. 3, lines 25-34), which corresponds to "determining the number of

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syllables in the digital data representation of the at least one word"; and generating the ASCII spellings of the words recognized (Fig. 4A, 23 32), which corresponds to "providing an ASCII representation of the matched word in response to the number of syllables of the at least one word being identical to the number of syllables of the matched word in the library."

Regarding claim 2, Hutchins teaches everything claimed, as applied above (see claim 1); in addition, Hutchins teaches the conversion of the input utterance into words (Fig. 4A, col. 11, lines 25-42), which corresponds to "mapping the digital data representation of the at least one word to an ASCII representation of the at least one word."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-18, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutchins in view of Gould (U.S. Patent No. 5,794,189).

Regarding claim 3, Hutchins teaches everything claimed, as applied above (see claim 1), but Hutchins does not specifically teach "providing the ASCII representation of the matched word comprises displaying the ASCII representation thereof on a computer

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screen." However, the examiner contends that this concept was well known in the art, as taught by Gould.

In the same field of endeavor, Gould teaches the use of a display screen where recognized text can be displayed (Fig. 1 **135**, col. 7, lines 49-51).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins by specifically providing the display and editing capabilities, as taught by Gould, for the purpose of giving the user feedback on the recognized text and the opportunity to edit the text.

Regarding claim 4, Hutchins teaches everything claimed, as applied above (see claim 1), but Hutchins does not specifically teach that "receiving digital data representation of speech comprises receiving a binary bit stream output from a sound card." However, the examiner contends that this concept was well known in the art, as taught by Gould.

Gould discloses a speech recognition system that uses a sound card to digitize the user input (Fig. 1 **12 14 16**, col. 5, lines 11-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins by specifically using a sound card to digitized audio input, as taught by Gould, as a low-cost and conventional way to input user utterances.

Regarding claim 5, Hutchins teaches everything claimed, as applied above (see claim 1), but Hutchins does not specifically teach that "receiving digital data representation of speech comprises receiving a digital waveform representation of the

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speech output from a sound card." However, the examiner contends that this concept was well known in the art, as taught by Gould.

Gould discloses a speech recognition system that uses a sound card to digitize the user input where the analog signal is converted to a digital signal representing the waveform (Fig. 1 **12 14 16**, col. 5, lines 11-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins by specifically using a sound card to digitized the audio input waveform, as taught by Gould, as a low-cost and conventional way to input user utterance waveforms.

Regarding claim 6, Hutchins teaches everything claimed, as applied above (see claim 1), but Hutchins does not specifically teach that "receiving a user input having letters in the at least one word of the speech." However, the examiner contends that this concept was well known in the art, as taught by Gould.

Gould discloses a speech recognition system that allows for the entry of single letters by spelling the words (col. 2, lines 1-2, col. 4, lines 17-65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins by specifically allowing for the entry of individual letters, as taught by Gould, as a way to implement editorial corrections.

In addition, Hutchins does not specifically teach "storing the user input letters and associating the letters with the receiver digital data representation of the at least one word." However, the examiner contends that this concept was well known in the art, as taught by Gould.

Gould further discloses the ability to enter and edit words with an inherent method of storage (col. 4, lines 17-65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins by specifically allowing for the entry of individual letters, as taught by Gould, as a way to implement editorial corrections.

Regarding claim 7, Hutchins in view of Gould teach everything claimed, as applied above (see claim 6), but Hutchins in view of Gould do not specifically teach that "a user input comprises receiving user input entered via a keyboard." However, the examiner contends that this concept was well known in the art, as taught by Gould.

Gould further teaches that user input can be performed with a keyboard (col. 4, lines 18-39, line 22, in particular).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins in view of Gould by specifically providing for keyboard input, as taught by Gould, for the purpose of editing the user input.

Regarding claim 8, Hutchins in view of Gould teach everything claimed, as applied above (see claim 6), but Hutchins in view of Gould do not specifically teach "receiving a user input comprises receiving user auditory input from a sound card." However, the examiner contends that this concept was well known in the art, as taught by Gould.

Gould further teaches that user input can be from a sound card (Fig. 1 **12 14 16**, col. 5, lines 11-25).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins in view of Gould by specifically providing a sound card, as taught by Gould, since a sound card is a common and economical means of inputting audio data.

Regarding claim 9, Hutchins teaches everything claimed, as applied above (see claim 1). Hutchins also teaches that in the process of recognizing an utterance the digital signal is analyzed for acoustic attributes (col. 13, lines 44-50), but Hutchins does not specifically teach the "matching the digital data representation of the at least one word to digital data representation in the library comprises matching waveform frequency, period and amplitude of the digital data representation of the at least one word to waveform frequency, period and amplitude of the digital data representation of words in the library." However, the examiner contends that this concept was well known in the art, as taught by Gould.

Gould teaches a continuous speech recognition system where the signal is analyzed and a group of parameters is calculated including frequency and amplitude (col. 5, lines 11-25) where the resulting speech frames are compared with stored speech models (col. 6, lines 4-12).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins by specifically providing the specific recognition method, as taught by Gould, as a standard what to implement recognition.

Regarding claim 10, claim 10 has the same limitations previously covered in the rejections of claims 1 and 9; as a result, claim 10 is rejected for the same reasons.

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Regarding claim 11, Hutchins in view of Gould teach everything claimed, as applied above (see claim 10). In addition, claim 11 has the same limitations previously covered in the rejection of claim 6; as a result, claim 11 is rejected for the same reasons.

Regarding claim 17, Hutchins in view of Gould teach everything claimed, as applied above (see claim 11). In addition, claim 17 has the same limitations previously covered in the rejection of claim 7; as a result, claim 17 is rejected for the same reasons.

Regarding claims 18, Hutchins in view of Gould teach everything claimed, as applied above (see claim 11). In addition, claim 18 has the same limitations previously covered in the rejection of claim 8; as a result, claim 18 is rejected for the same reasons.

Regarding claim 12, Hutchins in view of Gould teach everything claimed, as applied above (see claim 10). But Hutchings in view of Gould do not specifically teach the following sequence of operations:

- a) displaying a list of closest word matches from the library in response to not finding an identical word match in the library;
- b) receiving a user selection of a word from the displayed list;
- c) storing the user selected word and associating the letters thereof with the received digital data representation of the at least one word.

However, the examiner contends that this concept was well known in the art, as taught by Gould.

Gould further teaches that a user may call up a correction window with a choice list for each word and select a word for storing with the document being edited (col. 1, line 56 through col. 2, line 17).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins in view of Gould by specifically supporting the sequence of operations, as taught by Gould, for the purpose of simplifying the correction process.

Regarding claim 13, Hutchins in view of Gould teach everything claimed, as applied above (see claim 10); in addition, Hutchins teaches the input of a digital waveform (Fig. 4A **12 14 16**) with a resulting output in the form of ASCII spelled words (Fig. 4A **28 32**), which corresponds to "mapping the digital waveform data representation of the at least one word to an ASCII representation of the at least one word."

Regarding claim 14, Hutchins in view of Gould teach everything claimed, as applied above (see claim 10). In addition, claim 14 has the same limitations previously covered in the rejection of claim 3; as a result, claim 14 is rejected for the same reasons.

Regarding claim 15, Hutchins in view of Gould teach everything claimed, as applied above (see claim 10). In addition, claim 15 has the same limitations previously covered in the rejection of claim 4; as a result, claim 15 is rejected for the same reasons.

Regarding claim 16, Hutchins in view of Gould teach everything claimed, as applied above (see claim 10). In addition, claim 1 has the same limitations previously covered in the rejection of claim 5; as a result, claim 16 is rejected for the same reasons.

Regarding claim 20, claim 20 has the same limitations previously covered in the rejections of claims 1 and 3; as a result, claim 20 is rejected for the same reasons.

Regarding claim 21, Hutchins in view of Gould teach everything claimed, as applied above (see claim 20). In addition, claim 21 has the same limitations previously covered in the rejection of claim 2; as a result, claim 21 is rejected for the same reasons.

Regarding claim 22, Hutchins in view of Gould teach everything claimed, as applied above (see claim 20), but Hutchins in view of Gould do not specifically teach "a training process operable to receive a user input of letters comprising a word in the spoken speech, and associate and store the received letters with the digital speech representation thereof." However, the examiner contends that this concept was well known in the art, as taught by Gould.

Gould further teaches a process where training is continuous and the text associated with a word can be changed (col. 1, 39-50).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins in view of Gould by specifically providing training, as taught by Gould, for the purpose of updating the text associated with a recognition word.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hutchins in view of Gould and further in view of Lucas et al. (U.S. Patent Application No 0143533), hereinafter referred to as Lucas.

Regarding claim 19, Hutchins in view of Gould teach everything claimed, as applied above (see claim 10), but Hutchins in view of Gould do not specifically teach a method for "forming a document using a collection of the matched words." However, the examiner contends that this concept was well known in the art, as taught by Lucas.

In the same field of endeavor, Lucas discloses a speech recognition system that can be used for the creation of documents (¶5).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins in view of Gould by specifically providing the ability to form documents, as taught by Lucas, for the purpose of doing dictation and document production using speech recognition.

In addition, Hutchins in view of Gould do not specifically teach "transmitting the document to a recipient." However, the examiner contends that this concept was well known in the art, as taught by Lucas.

Lucas further teaches that the prepared documents may be sent to a recipient by facsimile, or email (Fig. 1 52 56, ¶26).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hutchins in view of Gould by specifically providing the ability to transmit a document, as taught by Lucas, for the purpose of convenient distribution of a prepared document.

Citation of Pertinent Art

5. The following prior art made of record but not relied upon is considered pertinent to the applicant's disclosure:

- a) Kahn et al. (U.S. Patent No. 6,122,614) discloses a system for automating transcription services that includes a keyboard for corrections, a display, and a sound card.
- b) Moshier (U.S. Patent No. 4,227,177) discloses a speech recognition method that processes the incoming audio signal.
- c) Stentiford (U.S. Patent No. 4,955,056) discloses a pattern recognition system that can be used for speech recognition and includes the processing of a time domain waveform.

Conclusion

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA.
Sixth Floor (Receptionist)

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. V. Paul Harper whose telephone number is (703) 305-4197. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold, can be reached on (703) 305-4379. The fax phone number for the Technology Center 2600 is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service office whose telephone number is (703) 306-0377.

VPH/vph
October 30, 2002

Marsha D Banks-Harold
MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
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